

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2004/052465

International filing date (day/month/year)
07.10.2004

Priority date (day/month/year)
09.10.2003

International Patent Classification (IPC) or both national classification and IPC
C14C3/16

Applicant
TFL LEDERTECHNIK GMBH

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2004/052465

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2004/052465

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. ☐ It has not been possible to consider the validity of the priority claim because a copy of the priority document was not available to the ISA at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

4. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-13
	No: Claims	
Inventive step (IS)	Yes: Claims	1-13
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-13
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Novelty (Art. 33(2) PCT)/ Inventive step (Art. 33(3) PCT)

Reference is made to the following documents:

D1: US-B-6 251 414 (cited in the application)

D2: DE 38 11 267 C (cited in the application)

The subject-matter of claims **1-13** is regarded as novel over the prior art documents cited in the International Search Report and the application (Art. 33 (2) PCT) since none of the documents discloses a composition which comprises a) 5-50 % b. wt. of an aliphatic dialdehyde having 2-10 carbon atoms, b) 2.5-20 % b. wt. of reductive saccharide(s) having a dextrose equivalent of 10-100, c) 2.5-20 % b.wt. of water-soluble, optionally monoetherified polyoxaalkylene glycol(s) (M > 100-2000) and d) 90-10 % b.wt. of water, 0.05-0.19 mol of b) and c) being added per mole of a); nor a process for the pretanning of pickled pelts in an aqueous liquor compr. said composition.

The subject-matter of present claims **1-13** is based upon an inventive step, since there is no hint in document D1, which is considered to represent the closest prior art, alone or in combination with any other document cited in the International Search Report for the claimed compositions and methods for the following reasons:

Document D1 discloses an aqueous formulation for the pretanning of animal raw hides which comprises a) a reductive saccharide (dextrose equivalent of 10-100) and b) an aliphatic dialdehyde having 2-10 carbon atoms (D1: col. 1, l. 31-67 and examples 1 and 2), no further ingredients are added to the treatment bath.

The technical problem of the present application is regarded to be the provision of a composition comprising aliphatic dialdehydes for the pretanning of hides in order to reduce the contact time during pretanning and to achieve a better shrinkage temperature of the resulting leather.

This problem is solved with the composition as defined above as can be seen from example B2 (pickled pelt is treated in aqueous liquor comprising a composition A1 of sucrose syrup, polyethylene glycol (M of 400) and pentanediol), the resulting sythan-tanned leather exhibits an increase in the shrinkage temperature to 71 °C, the pretanned pelts exhibit less yellowing, are pretanned in shorter times and exhibit good characteristics (see page 4, paragraph 1-2).

**WRITTEN OPINION OF THE
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AUTHORITY (SEPARATE SHEET)**

International application No.

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Although the use of aqueous pretanning compositions which comprise glutaric dialdehyde and ethylene glycol monobutyl ether is known from D2 (D2: example 2), no indication for the use of all three ingredients in said mole ratios was found in the prior art and thus, inventive step is acknowledged.

2. Industrial Applicability (Art. 33(4) PCT)

The application concerns a composition for the pretanning of hides and is thus useful in industries.

Re Item VIII

Clarity (Art. 6 PCT)

The presence of the wording "preferably" in present claim 2 and the preferred embodiment that follows has absolutely no limiting effect upon the scope of the claim. This preferred embodiment should either be deleted or made the subject of a further dependent claim (Guidelines for Search and Preliminary Examination, 5.40).